Approximating square root of a number.

Square root of a number \( x \) can be approximated by following procedure described below.

1) \( guess_0 = \text{initial guess} \)

2) \( guess_{n+1} = guess_n - (guess_n^2 - x)/(2 \times guess_n) \)

3) Iterate until difference of \( guess_n \) and \( guess_{n+1} \) is sufficiently small.

1. Define an abstract class named “SqrtSolver” having an abstract method with following signature.

   ```java
   public Double sqrt(Double currentGuess, Double x);
   ```

2. Define a concrete class named “RecursiveSqrtSolver” which is a subclass of “SqrtSolver” and implement the procedure described above in a recursive manner.

3. Define a concrete class named “IterativeSqrtSolver” which is a subclass of “SqrtSolver” and implement the procedure described above in an iterative manner.

4. Define a “main” method in the class “SqrtSolver”, and test the both of its subclasses.

Please use following package name – kr.ac.postech.csed233.hw1.YOUR_STUDENT_ID